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CS 32

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Homework 2

1. stack

the coordinates are in the form row, column

6, 5

6, 6

6, 4

7, 4

8, 4

8, 3

8, 2

8, 1

7, 1

6, 3

5, 5

4, 5

1. queue

the coordinates are in the form row, column

6, 5

5, 5

6, 4

6, 6

4, 5

6, 3

7, 4

3, 5

4, 4

8, 4

2, 5

4, 3

The two algorithms differ in the way they add items to their list. The stack adds items such that the coordinate east is the latest possible coordinate added to the stack since it is the last coordinate that is encountered and the coordinate that would be the first one to be popped. For the queue, the coordinate north would be the first item added and the coordinate that would be popped. Therefore, the current coordinates usually differed because the direction that would be popped was different due to the different nature of stacks and queues.